

## Freeform Search

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**Database:**  US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Term:**  

**Display:**  **Documents in Display Format:**  **Starting with Number**

**Generate:**  Hit List  Hit Count  Side by Side  Image

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### Search History

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**DATE:** Thursday, January 22, 2004 [Printable Copy](#) [Create Case](#)

| <u>Set Name</u>   | <u>Query</u>                                       | <u>Hit Count</u> | <u>Set Name</u> |
|-------------------|--|------------------|-----------------|
| <u>result set</u> |  |                  |                 |
| <u>L7</u>         | L6 with 13   | 24               | <u>L7</u>       |
| <u>L6</u>         | plasmid or gene therapy or nucleic or DNA          | 229527           | <u>L6</u>       |
| <u>L5</u>         | L4 with 13   | 8                | <u>L5</u>       |
| <u>L4</u>         | fusogenic or conjugated or complexed or covalently | 188336           | <u>L4</u>       |
| <u>L3</u>         | L2 with 11   | 242              | <u>L3</u>       |
| <u>L2</u>         | cationic or polycationic                           | 156122           | <u>L2</u>       |
| <u>L1</u>         | polyhistidine or poly-L-histidine or histidine     | 41549            | <u>L1</u>       |

END OF SEARCH HISTORY

[First Hit](#) [Fwd Refs](#) [Generate Collection](#) [Print](#)

L7: Entry 19 of 24

File: USPT

Apr 18, 2000

DOCUMENT-IDENTIFIER: US 6051429 A

\*\* See image for Certificate of Correction \*\*

TITLE: Peptide-enhanced cationic lipid transfections

## CLAIMS:

52. The method of claim 51 wherein said nucleic acid-binding group comprises the cationic peptide sequence (Uaa).sub.u where each amino acid, Uaa, in the sequence, independently of any other amino acid in the sequence can be lysine, arginine, ornithine, homoarginine, or histidine and where u is an integer from 1 to about 20.

56. The method of claim 55 wherein said nucleic acid-binding group comprises the cationic peptide sequence (Uaa).sub.u where each amino acid, Uaa, in the sequence, independently of any other amino acid in the sequence can be lysine, arginine, ornithine, homoarginine, histidine, glycine or proline and where u is an integer from 1 to about 20.

66. The method of claim 62 wherein said nucleic acid-binding group comprises the cationic peptide sequence (Uaa).sub.u where each amino acid, Uaa, in the sequence, independently of any other amino acid in the sequence can be lysine, arginine, ornithine, homoarginine, or histidine and where u is an integer from 1 to about 20.

70. The method of claim 69 wherein said nucleic acid-binding group comprises the cationic peptide sequence (Uaa).sub.u where each amino acid, Uaa, in the sequence, independently of any other amino acid in the sequence can be lysine, arginine, ornithine, homoarginine, histidine, glycine or proline and where u is an integer from 1 to about 20.

74. The method of claim 73 wherein said nucleic acid-binding group comprises the cationic peptide sequence (Uaa).sub.u where each amino acid, Uaa, in the sequence, independently of any other amino acid in the sequence can be lysine, arginine, ornithine, homoarginine, or histidine and where u is an integer from 1 to about 20.

89. The method of claim 88 wherein said nucleic acid-binding group comprises the cationic peptide sequence (Uaa).sub.u where each amino acid, Uaa, in the sequence, independently of any other amino acid in the sequence can be lysine, arginine, ornithine, homoarginine, or histidine and where u is an integer from 1 to about 20.

First Hit 

L7: Entry 14 of 24

File: PGPB

Jul 5, 2001

PGPUB-DOCUMENT-NUMBER: 20010006817  
PGPUB-FILING-TYPE: new-utility  
DOCUMENT-IDENTIFIER: US 20010006817 A1

TITLE: CELL DELIVERY COMPOSITIONS

PUBLICATION-DATE: July 5, 2001

US-CL-CURRENT: 435/440; 435/325, 435/455, 435/456, 435/458, 435/6, 435/69.1,  
435/91.1, 514/44, 530/300, 530/350, 536/23.1

APPL-NO: 09/ 251783 [PALM]

DATE FILED: February 17, 1999

CONTINUED PROSECUTION APPLICATION: CPA

## RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/075272, filed February 19, 1998,

## PRIORITY INFORMATION

[0001] This application claims priority to the co-pending provisional application No. 60/075,272 entitled "Cell Delivery Compositions" filed on Feb. 19, 1998, which is incorporated in its entirety by reference.

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L7: Entry 16 of 24

File: USPT

Oct 22, 2002

DOCUMENT-IDENTIFIER: US 6468981 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Compositions and methods for targeting pharmaceutically active materials to cells containing androgen receptors

Brief Summary Text (21):

Polycationic salts useful for completing with nucleic acids include salts of cationic polyamines such polylysines, specifically poly-L-lysines, polyarginines, specifically poly-L-arginine, polyhistidine, and protamines.

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L7: Entry 16 of 24

File: USPT

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DOCUMENT-IDENTIFIER: US 6468981 B1

\*\* See image for Certificate of Correction \*\*

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L7: Entry 14 of 24

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435/91.1, 514/44, 530/300, 530/350, 536/23.1

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L7: Entry 14 of 24

File: PGPB

Jul 5, 2001

DOCUMENT-IDENTIFIER: US 20010006817 A1

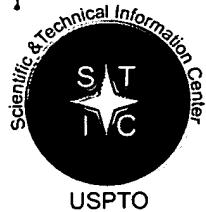
TITLE: CELL DELIVERY COMPOSITIONS

Detail Description Paragraph:

[0040] Those of ordinary skill in the art will, using known techniques, be able to prepare any of a variety of polyhistidine/polylysine compositions that can readily be tested according to the teachings herein to identify those with desirable delivery characteristics. The compositions must have sufficient polyhistidine composition (including available proton acceptor sites and/or polycationic character) to lyse endosomes, and sufficient polylysine composition to bind to nucleic acids, and condense them if necessary. Thus, the inventive polyhistidine/polylysine composition may comprise any combination of polylysine with polyhistidine, polylysine with histidine, or lysine with polyhistidine, associated with one another covalently or otherwise, so long as the combination is biocompatible and has the endosomolytic and nucleic acid binding/packaging capabilities described herein. As one of ordinary skill in the art will realize, the entire composition (including the bound nucleic acid) must be small enough to be taken up into cells. As mentioned above, endosomal compartments can usually accept entities up to about 150 nm in size.

Detail Description Paragraph:

[0103] The ability of the packaging agent to bind DNA can be assessed by monitoring complex formation with DNA using gel electrophoresis. The mobility of DNA on the gel will be retarded by complex formation, and the absence of any mobility of DNA on the gel suggests the complexation of all of the DNA. Preferably, complexation of DNA and the cationic polymer occurs as a ratio of 1:1 DNA/cationic polymer, and most preferably at a ratio of 1:3 DNA/cationic polymer as shown in FIG. 13 and 14 for DNA transferrin-polylysine and DNA/G-pHis mixtures. FIG. 15 depicts the gel electrophoresis of DNA/p-His mixtures and shows complexation at a weight:weight ratio of 1:0.5 DNA/p-His. Condensing of plasmid DNA can also be monitored by observing the ethidium bromide exclusion. For example, if gluconylated polyhistidine is used as the cationic polymer, the gluconylated polyhistidine efficiently condenses DNA at pH 5 where the gluconylated polyhistidine is .about.45% protonated. DNA is not condensed as effectively, however, at pH 7.4 where gluconylated polyhistidine is .about.5% protonated, as shown in FIG. 11.



# STIC Search Report

## Biotech-Chem Library

STIC Database Tracking Number: 112371

**TO:** Dave Nguyen  
**Location:** rem2d31  
**Art Unit:** 1623  
Jan 22, 2004

**Case Serial Number:** 10/018103

**From:** P. Sheppard  
**Location:** Remsen Building  
**Phone:** (571) 272-2529

**[sheppard@uspto.gov](mailto:sheppard@uspto.gov)**

### Search Notes

STIC-Biotech/ChemLib

112371

From: Page, Thurman  
Sent: Saturday, January 17, 2004 11:39 AM  
To: STIC-Biotech/ChemLib  
Cc: Nguyen, Dave; Page, Thurman  
Subject: FW: Rush Search request 10/018,103  
  
Importance: High

RUSH SEARCH APPROVED

Thurman K. Page  
SPE Art Units 1615 & 1616  
Technology Center 1600

RECEIVED  
JAN 20 2004  
STIC-Biotech/ChemLib  
(STIC)

-----Original Message-----

From: Nguyen, Dave  
Sent: Friday, January 16, 2004 9:17 PM  
To: Page, Thurman  
Cc: STIC-Biotech/ChemLib  
Subject: Rush Search request 10/018,103

THis case is due this bi-week. Please rush. Please do a polypeptide/peptide search on SEQ ID NOS: 4-6.

Thanks,  
Dave Nguyen  
Art Unit: 1632  
Ramsen Building  
2D31  
571-272-0731

Searcher: Sheppard  
Phone: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date Picked Up: 1/22/04  
Date Completed: 1/22/04  
Searcher Prep/Review: \_\_\_\_\_  
Clerical: \_\_\_\_\_  
Online time: \_\_\_\_\_

TYPE OF SEARCH:  
NA Sequences: \_\_\_\_\_  
AA Sequences: \_\_\_\_\_  
Structures: \_\_\_\_\_  
Bibliographic: \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST (where applic.)  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_